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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,312

02/03/2006

Takayuki Kanda

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EXAMINER

NGUYEN, KIM T

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/567,312	<b>Applicant(s)</b> KANDA ET AL.	
	<b>Examiner</b> Kim T. Nguyen	<b>Art Unit</b> 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/03/2006, 12/19/2006, 7/26/2007, 10/04/2007</u> .           | 6) <input type="checkbox"/> Other: _____                          |



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 7-15, 17-19 are rejected under 35 U.S.C. 101 because

Claims 7-9, 17 are directed towards **software per se**. Software can be considered statutory only if it is both functional **and** clearly embodied on a computer readable medium (see MPEP 2 106). When software is recorded on some computer-readable medium it will become structurally and functionally interrelated to the medium and will be statutory in most cases since use the technology permits the function of the software to be realized. See *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir 1994), and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759. Software is functional if the specific arrangement of the instructions enable a computer to accomplish some useful result arising from the arrangement of the instructions. However, even if the software of claim 1 is functional, it is not clearly defined as being embodied in a computer readable medium and is therefore not statutory. See *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759.

Regarding claims 10-12, 18, the claim recites a "machine-readable medium" which is not adequately defined in the specification. However, a "computer readable medium" can encompass a non-patentable medium, signal, or carrier wave that provides information or is usable by a processor(s). Since such a medium, signal, or carrier wave may take many forms, including, but not limited to, non-volatile, volatile, and transmission media (including coaxial cables, copper wires, fiber optics, wires that comprise a bus, and amplitude/frequency/phase modulated electromagnetic carrier waves), the claim as written can cover non-patentable subject matter (see MPEP 2106), and is non-statutory.

Claims 13-15, 19, as recited, is directed toward a method. To qualify as a statutory process, the claim should positively recite the other statutory class to which it is tied, for example by identifying the apparatus, i.e. computer, network, computer-readable medium, etc., that accomplishes the method steps or positively reciting the subject matter that is being transformed, for example by identifying the material that is being changed to a different state. As currently written the steps recited in claims 13-15, 19 may be performed by hand or mentally and are therefore not sufficiently tied to another statutory class. It is noted that computer is used to display however there is no indication that any of the other steps are performed by a computer and/or data received via a network, etc. Examples of insignificant post-solution activity include data gathering and outputting.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al (US 2002/0156751) in view of Inoue et al (US 2003/0014159) and Furumura (US 2002/0137425)

As per claim 1, Takagi teaches a control system for communication robot for supporting input of interactive actions to be performed by a communication robot, comprising:

- a storage means for storing in advance information on a plurality of behaviors (¶¶ 0170, 0289-0292) associated with a plurality of behavior programs including a spontaneous behavior program for performing a spontaneous behavior (¶ 0092) and a reflex behavior program prepared with inclusion of determination of a precondition and for performing a reflex behavior in

response to behavior of a person (§ 0112) when the precondition is satisfied (§§ 0115-0123);

- a behavior decision means for deciding a behavior to be performed by the communication robot from the list of behaviors displayed by the display means according to a user's operation (§§ 0097, 0099); and
- a generation means for generating reproductive motion information for interactive actions to be performed by the communication robot (§ 0105).

Takagi does not explicitly teach a display means for displaying a list of said plurality of behaviors in a user-selectable manner based on the information stored in the storage means and generating reproductive motion information based on a history of the behavior decided by the behavior decision means. However, Furumura teaches displaying a list of behaviors for a user to select (§ 0122). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the user a selectable list of behavior as taught by Furumura to the system of Takagi in order to allow the robot to perform a behavior the user wish to observe. Furthermore, Inoue teaches generating reproductive motion information based on a history of the behavior (abstract). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the history of the behavior to generate reproductive motion information as taught by

Inoue in the system of Takagi in order to save the user from selecting behaviors the user previously selected.

As per claim 2, Takagi teaches deciding an emotional expression which is to be added to the behavior to be performed by the communication robot (§ 0105), from a list of emotional expressions; and Inoue teaches generating the reproductive motion information based on the history of the behavior and emotional expression decided by the behavior decision means (abstract, §§ 0032, 0034). Furthermore, Furumura teaches displaying a list of a plurality of emotional expressions in a user-selectable manner (Figs. 12, 13, §§ 0122, 0124, 0119, 0075).

As per claim 3, Takagi does not explicitly teach determining whether or not the emotional expression selected by the user is appropriate to the selected behavior, and does not permit the emotional expression to be added to said behavior if the determination means determines that the emotional expression is not appropriate to the behavior. However, Takagi teaches the capability of preventing conflict or unreasonable behavior (§§ 0353, 0354). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to eliminate conflict emotion selected by the user in order to prevent



unreasonable behavior to improve natural expression to the robot.

As per claim 4, Takagi teaches transmitting an execution instruction for the behavior to the communication robot (¶¶ 0105, 0180).

As per claim 5-6, displaying the list of behaviors classified by region of the communication robot and displaying an image of an appearance of said communication robot performing said behavior would have been well known and obvious matter of design choice. One of ordinary skill in the art would have found it obvious to arrange the list of behaviors in regions of the robot in order to facilitate selections for the user.

As per claim 7-15 and 20, refer to claims 1-4 above.

As per claim 16-19, Takagi teaches correcting control data for performing the behavior according to the emotional expression and generates reproductive motion information including the corrected control data (¶¶ 0105, 0115, 0180).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim T. Nguyen whose telephone number is (571) 272-4441. The examiner can normally be reached on Monday-Thursday (8:30AM - 5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571)272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 19, 2009

/Kim T Nguyen/  
Primary Examiner, Art Unit 3661

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